

Editorial

Since the initial submission of this report in 1993, there have been significant developments in the field of laser dermatology. Continuing with Fitzpatrick's research (personal communication, San Diego, CA) on resurfacing of the skin, new developments in laser instrumentation have included optical parametric oscillation (OPO) lasers, changes in pulse duration, new protective glasses and progress in photodynamic therapy. Future rivalry continues between OPO lasers and the new higher output junction diode lasers. Richard Scheps, PhD, a laser physicist from the Naval Research Development Administration, San Diego, CA, has made important progress of laser diagnostics in dermatology by the introduction of optical phase conjugation, range gateing, and line scanning (Goldman, Scheps abstract was presented at the American Society of Laser Medicine and Surgery, San Diego, CA, April 1995). According to Scheps, research was started on basal cell cancer two years ago. At the present time, new happenings include holographic optical phase microscope with 3-D imagery; range gateing, an exceedingly fast electrical shutter discards reflected beams to produce a nondistorted image; and line scanning, making it possible to perform deeper penetration in translucent tissues. These optics were used initially in the turbid media of the ocean and currently are being utilized for imagery

of subsurface biopsies of tissues in the dermatology field. New diagnostics in fluorescence nonsurgical biopsies of tumors (Vo-Dinh, Overholt and Pasyehour (Lasers in Dentistry, SPIE:1995;2394:191); current studies of the confocal scanning microscopy diagnostics with vivid color and dynamic pictures by the R. Rox Anderson Group (Massachusetts General Hospital); and the early studies of Gmitro and Aziz (University of Arizona), Masters (Uniformed Services University of Health Sciences, Bethesda, MD), Goldman and O'Grady (Naval Medical Center, San Diego, CA), have shown a great value for new vibrant dermatopathology. Masterson has suggested a larger slit instead of a small point and the use of the infrared lasers for deeper observation of the dermis. The Future of Laser Dermatology should also include the mention of confocal scanning microscopy for the question of sun exposure. Confocal scanning microscopy can detect early melanoma from excessive sun exposure. This can be detected in the skin of people exposed to the sun. This would be important for people assigned to guard duty and to workers who work outdoors. We predict a great future for laser dermatology as well as for the science of laser medicine and surgery as a whole.

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